REMARKS

The period for response to the instant Office Action mailed December 19, 2001, and set to expire March 19, 2001, is extended one month to expire April 19, 2002, pursuant to the request for extension of time submitted herewith under the provisions of 37 C.F.R. 1.136(a). This response is therefore timely filed.

Fig. 2B is corrected to correct an obvious typographical error. The terminal amino acid is incorrectly numbered "381" when in fact it is amino acid 380. Beginning with amino acid 363, Leu, there are 18 amino acids remaining in the sequence. Thus, the terminal Thr is amino acid 380.

Before the instant amendment, claims 5-36, 38, and 44-59 were in the application. Claims 5-36, 38 and 52-59 stand withdrawn from consideration as directed to non-elected subject matter. Claims 44-51 are under examination.

Claims 48-51 are rejected under 35 U.S.C. 112, first paragraph. The Examiner urges that although the polypeptide of the claimed invention has been stated in the specification to be useful for blocking the activity of IL-13, IL-13 being a mediator of immunological and inflammatory mechanisms, this does not form a nexus to treatment of a specific disease. The rejection is respectfully traversed and reconsideration thereof is requested.

Firstly, applicants' specification does not only disclose blocking of IL-13 activity as a use for the full scope of the claimed polypeptides, but also explicitly discloses their usefulness in treating allergy and inflammatory disease. These statements are presumptively accurate until the PTO provides reasons to doubt their accuracy. There are no such reasons of record. In re Marzocchi, 456 F.2d 790, 173 USPQ 228 (CCPA 1972). Moreover, the prior art clearly establishes the usefulness of these polypeptides.

Applicants call attention to WO94/04680 published March 3, 1994, which discloses the use of *inter alia* an antagonist of IL-13 to modulate the immune response to an infection or allergen (page 3, lines 26-29.) WO94/04680 further discloses that IL-13 induces expression of various Ig's, particularly, IgE (page 17, lines 10-11) and is an important factor in controlling IgE mediated allergic reactions (page 18, lines 5-7.) Hence, IL-13 antagonists would be useful for blocking IgE production thereby reducing or inhibiting IgE-mediated allergic diseases (page 24, lines 1-6.) It is further disclosed that systemic responsiveness to infections can be modulated with antagonists of IL-13. The latter would therefore be useful in stimulating an

immunoglobulin-mediated response and a functional increase in opsonization and clearance of infective particles (page 23, lines 1-9.) Thus, WO 94/04680, which was published prior to the filing of the instant application, discloses the use of IL-13 antagonists for stimulating systemic response to infections and increasing the opsonization and clearance of infective particles, and for reducing the inhibiting IgE-mediated allergic diseases. Clearly then, there does exist a nexus between antagonizing IL-13 activity and treatment of disease.

Moreover, Collins et al U.S. Patent 5,710,023 cited by the Examiner in the instant Office Action, as discussed hereinbelow, discloses that IL-13 receptor proteins may be useful in the treatment or modulation of various medical conditions in which IL-13 is implicated (IL-13-related conditions) including Ig-mediated conditions, particularly, IgE-mediated conditions, e.g., allergic conditions and such pathological states as bacterial and viral infections (column 8) and in a divisional of the '023 patent, (U.S. 6,248,714) claims were granted for a method of inhibiting binding of IL-13 to the IL-13 receptor in a mammal by administering a pharmaceutical composition containing an IL-13 receptor protein, thereby evidencing that IL-13 inhibition is a recognized method of treatment and hence that IL-13 receptor proteins are properly claimed as pharmaceutical compositions. In fact, claims were granted for pharmaceutical compositions containing an IL-13 receptor protein in U.S. 6,268,480, which is also a divisional of the cited '023 patent. Thus, the issuance of the Collins patent also illustrates that the PTO considers the subject matter of the instant claims to be fully enabled and patentable over the prior art.

The instant specification clearly teaches that the claimed polypeptides (especially those in soluble form) inhibit the binding of IL-13 to its receptor (page 13, lines 16-17.) Accordingly, pharmaceutical compositions containing the peptides would be useful in a method of inhibiting binding of IL-13 to the IL-13 receptor and hence for treating allergic conditions and infections. Accordingly, claims 48-51 fully meet the requirements of 35 U.S.C. § 112.

Claims 48-51 are also rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to make and/or use the invention. The Examiner specifically refers to pharmaceutical compositions containing the soluble forms of the IL-13 receptor, i.e., the polypeptides of SEQ ID NO: 2 from residue 1 to 343 and from 1 to 337, and the polypeptide of SEQ ID NO: 2 in which the 8 c-terminal residues are substituted by the 6 residues of SEQ ID No. 11. The rejection is traversed and reconsideration thereof is requested.

As disclosed at page 6, lines 9-21, of the instant specification, the polypeptides referred to by the Examiner are advantageous biologically active variants of the polypeptide of SEQ ID NO: 2. At page 5, lines 6-7, "biologically active" is defined as "capable of binding specifically to IL-13", i.e., having the same biological activity as the polypeptide of SEQ ID NO: 2. Accordingly, as explained hereinabove, pharmaceutical compositions containing these polypeptides would be useful in a method of inhibiting binding of IL-13 to the IL-13 receptor and hence in treating allergic conditions and infections. Thus, claims 48-51 are in full compliance with the requirements of 35 U.S.C. § 112.

Claims 44, 47, 48, and 51 are rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventor had possession of the claimed invention at the time of filing. The Examiner specifically refers to the soluble polypeptides of amino acids 1-343 and 1-337 of SEQ ID NO: 2 and pharmaceutical compositions thereof. The rejection is traversed and reconsideration thereof is requested.

First of all, the polypeptide of amino acids 1-343 and 1-337 of SEQ ID NO: 2 are fully described by their amino acid sequences. Moreover, the specification teaches that these soluble forms are IL-13 antagonists and are preferred for use in pharmaceutical compositions (specification page 13, lines 9-20.) Example 6 specifically describes the preparation of one such polypeptide (residues 1-337) and Figures 5 and 6 show the inhibition of the binding of IL-13 to its receptor by the soluble polypeptide. Thus, it would have been clear from the specification that the inventors had possession of the soluble forms of the IL-13 receptor protein; that said forms were biologically active as IL-13 antagonists and that pharmaceutical compositions thereof were useful for inhibiting the binding of IL-13 to its receptor and hence for identifying IL-13 agonists or antagonists and for treating allergic conditions and infections.

Claims 44, 45, and 47 are rejected under 35 U.S.C. § 102 as discussed more fully hereinbelow. The Examiner states that Applicant cannot rely on the foreign priority papers (France 95/14424) because a translation of said papers has not been made of record. In fact, a certified copy of French priority application 95/14424 and a sworn translation thereof were filed in the PTO on May 8, 2000, as evidenced by the copy of the stamped postal receipt card submitted herewith.

Claims 44, 45, and 47 are rejected under 35 U.S.C. § 102(b) as anticipated by Vita et al on the grounds that it would be expected that the purified polypeptide disclosed therein would inherently comprise the amino acid sequence of the polypeptide of SEQ ID NO: 2 comprising residues 1-343 or 1-337. The Examiner specifically refers to Fig. 4, panel B, urging that it discloses an IL-13 receptor polypeptide purified from solubilized cells by electrophoresis and having an apparent molecular weight of 70 kD comparable to that disclosed in the instant specification. The rejection is traversed and reconsideration thereof is requested.

Applicants' claims are directed to purified IL-13 receptor polypeptides of specified amino acid sequences. Vita et al do not disclose any amino acid sequences. Moreover, Fig. 4B shows radioautographs of complexes of labeled IL-13 GYGY bound to a ligand or ligands of unknown structure in A431 cells. Moreover, in the discussion of Fig. 4, it is stated that the nature of the protein that yields the 70 kD complex is not clear (page 3514, right column.) In fact, the reference points out that the results of the reported studies suggest that the IL-13 receptor may be constituted by a subset of the IL-4 receptor complex associated with at least one additional protein (page 3512, left column.) Clearly, the Vita et al reference does not disclose a purified polypeptide of SEQ ID NO: 2 or soluble forms thereof and hence does not anticipate claims 44, 45, and 47.

As to the rejection of claims 44, 45, and 47 under 35 U.S.C. 102(e) as anticipated by Collins, et al on the grounds that SEQ ID NO: 4 thereof corresponds to SEQ ID NO: 2 here-claimed, Applicants point out that the filing date of Collins et al is March 1, 1996, i.e., well after the December 6, 1995, filing date of Applicants' French priority application 95/14424, and accordingly, Collins et al is incompetent to support a rejection under 35 U.S.C. 102(e).

In view of the foregoing, it is submitted that all rejections of claims 44 and 47-51 under 35 U.S.C. § 112 and of claims 44, 45, and 47 under 35 U.S.C. § 102 have been overcome, and no rejection of claim 46 having been made, said claim is assumed to be allowable.

New claims 60 – 110 are being added at this time to preserve applicant's right to have interferences with the family of U.S. Patents 5,710,023, 6,214,559, 6,248,714, and 6,268,480. Claims 60 – 71 copy the claims of US patent 6,214,559. Claims 60-62 correspond essentially identically to the claims of '559. The same or substantially the same subject matter is also the subject of claims 63-71. The language of the claims is clearly supported in Fig. 2a; page 7, line 26; page 6, lines 19 and 17-25; and page 24, lines 5 and 14, among others, e.g., in conjunction

with page 13, lines 5-8 and 14-17, the paragraph bridging pages 12 and 13, page 13, line 26; and page 5, line 6, among others. As for fragments, see page 3, lines 34 and 38, among others.

Claims 72 to 88 and 111-114 copy the claims of US patent 6,268,480 and are drawn to the same or substantially the same subject matter. The passages recited above alone or in combination with other passages support these claims. Such other passages include page 13, lines 9+, page 9, lines 13+, the Examples, page 8, lines 2-19, etc.

Claims 89 to 110 copy the claims of 6,248,714 and are drawn to the same or substantially the same subject matter. These claims are supported by the passages mentioned above and as well by, e.g., page 4, lines 15-26; page 13, lines 11-28, original claims 37, 42, and 43; page 1, line 25; page 9, line 35, etc.

Lastly, applicants point out that at least elected claims 45 and 49, like new claims 72-88 and 111-114, are drawn to the same or substantially the same subject matter as the claims of U.S. Patent 6,268,480, and at least claims 5, 16, and 30, which stand withdrawn from consideration, are drawn to the same or substantially the same subject matter as the claims of U.S. Patent 5,710,023.

Attached hereto is a marked-up version of the changes made to the claims by the instant amendment. The marked-up version is entitled "Version With Markings To Show Changes Made".

This application is believed to be in condition for further and favorable reconsideration and such action is earnestly solicited.

Respectfully submitted,

Date April 10, 2002

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Version With Markings To Show Changes Made

In the specification:

Fig. 2B has been amended as shown in red on the sheet submitted herewith.

In the Claims:

Claims 60-114 have been added.